

ABSTRACT

Disclosed are different titanium aluminide (Ti-Al) honeycomb panel structures formed from a gamma-based Ti-Al (γ -Ti-Al) or orthorhombic Ti-Al (O-Ti-Al) honeycomb core brazed to a γ -Ti-Al or O-Ti-Al facing sheet(s), where a metal braze filler foil containing copper and one or more other metals is used to join the faying surface of the honeycomb core and the faying surface of the facing sheet(s). The structures and method of the invention are useful where high strength, lightweight materials are required, such as in aircraft and other aerospace-related applications.